

Model LM-510 Liquid Cryogen Level Monitor

Standard Features:

- Bright, TFT LCD display 240 x 400.
- Numeric (cm, in or %) and graphical level indication
- USB, Ethernet computer interfaces
- Two models available:
 - Single channel (LHe or LN₂)
 - Dual channel (LHe/LN₂, LHe/LHe, LN₂/LN₂ or LHe/Helium Reliquifier Control)
- 4-20mA and 0-10VDC analog output
- Audible alarm (can be silenced).
- High and Low setpoints for each channel
- Sample and Hold Operation, Burnout Protection and De-Ice Cycle for LHe.
- LabVIEW® drivers available at no extra charge.
- CE-Marked

Optional Features:

- IEEE-488.2 Computer interface.
- RS-232 Computer interface.
- Line Voltage Output Controller.
- 19" Rack mountable cabinet

The LM-510 Liquid Cryogen Level Monitor is the most advanced instrument for monitoring and controlling cryogenic liquids available today. Its versatile architecture allows configuration to virtually any cryogenic fluid including liquid helium, liquid nitrogen, LOX and many others.

The LM-510 is available in single channel or two-channel versions. With the two-channel option the instrument has two independent input channels that are factory configurable to either the same or different liquid types. Flexible calibration procedures allow the use of two, three, or four wire configured liquid helium sensors.

Capacitive sensors are used to monitor liquid nitrogen and other cryogenic fluids.

The LM-510 can monitor many manufacturers' sensors due to advanced circuit design.

The LM-510 has user-adjustable high and low set points that may be used to control cryogenic solenoid valves (Optional Line Voltage Controller required). With the two-channel option, independent set points can be adjusted for each channel. This allows simultaneous control of two liquid cryogen systems with a single LM-510.

Also included are fully adjustable alarms for each channel. Most commonly set below the low control set point, the alarm can be used to alert the user (audibly and visually) to a problem with the refill cycle, and to automatically take action (relay contacts are provided).

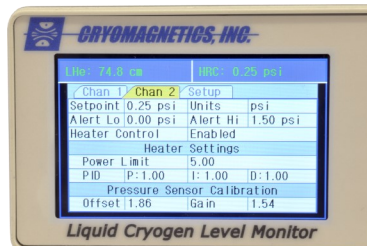
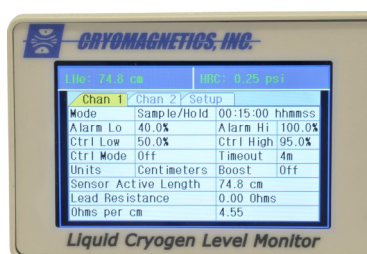
Unique features of the LM-510 include a sensor deicing cycle and filament burnout protection for liquid helium systems. This insures reliable, accurate level readings even under the most adverse cryogenic conditions.

Computer control of the LM-510 is possible via USB and Ethernet interfaces – both are provided in the standard configuration. IEEE-488 and RS-232 interfaces are available as options.

LabVIEW® virtual instrument drivers are available to allow computer control via a familiar, intuitive interface. A wide variety of other options are also available that allow the instrument to be upgraded and tailored to your particular requirements.

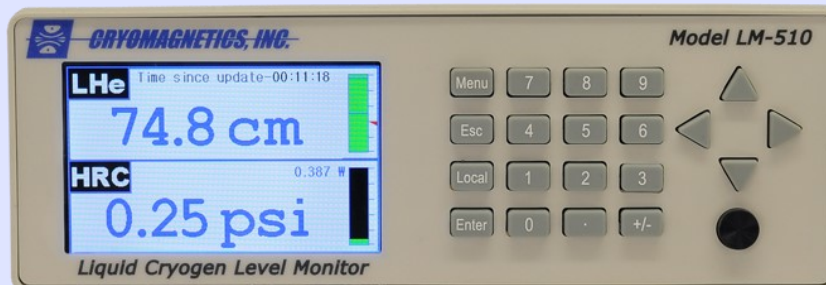
Online ordering is available for our electronic products and cryogenic accessories such as current leads.

Model LM-510-13, Helium Level and Reliquifier Control



Intuitive Configuration Menus

The Model LM-510-13 features a Helium Recondenser Controller installed in Channel 2. The controller is designed to monitor pressure in a cryostat containing liquid helium and helium vapor that is equipped with helium reliquifier. The controller maintains optimal pressure for

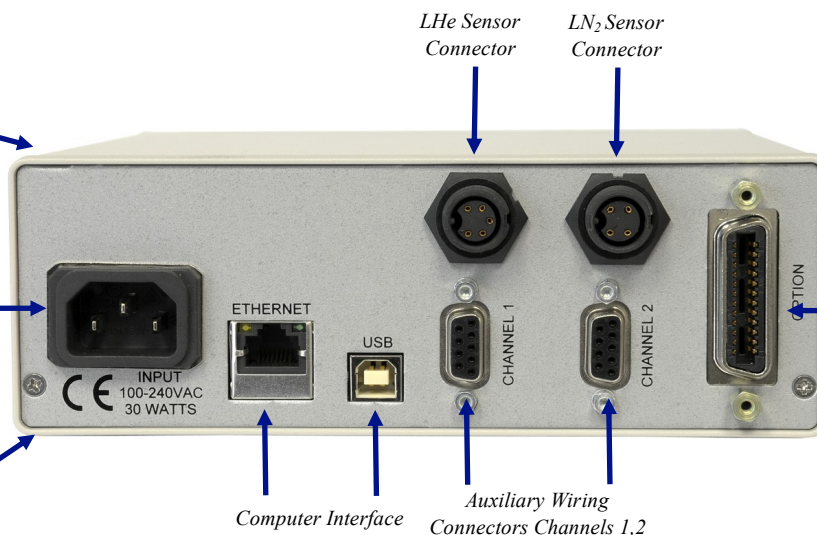


recondensing and safety by adding heat to the system as needed. When properly configured, it prevents system contamination and icing by maintaining positive pressure in the cryostat.

Compact Case 2.50"H x
7.25"W x 7.00"D (67mm
x 184mm x 178mm)

Worldwide Line Voltage/
Frequency Standards

Lightweight 2.2
pounds (1.00
kilograms)



Computer Interface

Auxiliary Wiring
Connectors Channels 1,2

IEEE-488.2 or RS-232
Computer Interface
(optional)

Standard 19" Width Rack
Mountable Cabinet
Available

LM-510 Dual, Rear Panel View

Contact us today to order your configuration!

LM-510-10	Single Channel Liquid Helium
LM-510-11	Dual Channel Liquid Helium
LM-510-12	Dual Channel Liquid Helium/Liquid Nitrogen
LM-510-20	Single Channel Liquid Nitrogen
LM-510-22	Dual Channel Liquid Nitrogen
LM-510-13	Dual Channel Liquid Helium/Reliquifier Control

Available Options:

LM-510-XX-1	IEEE-488 Interface
LM-510-XX-2	RS-232 Interface
LM-510-XX-3	19" Rack Mountable Cabinet
LM-510-XX-4	Line Voltage Controller



1006 Alvin Weinberg Drive • Oak Ridge, Tennessee 37830
Telephone (865) 482-9551 • Fax (865) 483-1253
Web: www.cryomagnetics.com • Email: sales@cryomagnetics.com